

CLAIMS

1. A process for producing a homogeneous type solid catalyst component or a homogeneous type solid catalyst
5 comprising a step for removing a fine-powdery component and/or a shapeless component utilizing a difference between their sedimentation velocities of the catalyst component or the catalyst in a solvent.

2. A process for producing a homogeneous type solid catalyst component or a homogeneous type solid catalyst
10 comprising, in a washing step in the production of a homogeneous type solid catalyst component or a homogeneous type solid catalyst, a step for removing a fine-powdery component and/or an shapeless component by removing a slurry-form portion before
15 the completion of sedimentation of a fine-powdery component and/or an shapeless component.

3. The process according to claim 1, wherein the homogeneous type solid catalyst component or the homogeneous type solid catalyst is a modified particle obtainable by
20 contacting the following (a), the following (b), the following (c) and a particle (d):

(a): a compound represented by the following general formula [1]:



25 (b): a compound represented by the following general formula [2]:



(c): a compound represented by the following general formula [3]:



(in the above formulae [1] to [3], respectively, M^1 represents a typical metal atom in the groups I, II, XII, XIV or XV in The Periodic Table, and m represents a valence of M^1 ; L^1 represents
5 a hydrogen atom, a halogen atom or a hydrocarbon group, and in case where plural L^1 's exist, they may be the same or different; R^1 represents an electron attractive group or a group containing an electron attractive group, and in case where plural R^1 's exist, they may be the same or different; R^2 represents a hydrocarbon
10 group or a halogenated hydrocarbon group; T represents, independent of each other, an atom in the groups XV or XVI in The Periodic Table, and t represents a valence of T in respective compounds.)

4. The process according to claim 2, wherein the
15 homogeneous type solid catalyst component or the homogeneous type solid catalyst is a modified particle obtainable by contacting the following (a), the following (b), the following (c) and a particle (d):

(a): a compound represented by the following general
20 formula [1]:



(b): a compound represented by the following general
formula [2]:



25 (c): a compound represented by the following general formula [3]:



(in the above formulae [1] to [3], respectively, M^1 represents a typical metal atom in the groups I, II, XII, XIV or XV in The

Periodic Table, and m represents a valence of M^1 ; L^1 represents a hydrogen atom, a halogen atom or a hydrocarbon group, and in case where plural L^1 's exist, they may be the same or different; R^1 represents an electron attractive group or a group containing an electron attractive group, and in case where plural R^1 's exist, they may be the same or different; R^2 represents a hydrocarbon group or a halogenated hydrocarbon group; T represents, independent of each other, an atom in the groups XV or XVI in The Periodic Table, and t represents a valence of T in respective compounds.)

5. The process according to claim 1, wherein the homogeneous type solid catalyst component or the homogeneous type solid catalyst is a modified particle obtainable by contacting an aluminoxane (f) and a particle (d).

6. The process according to claim 2, wherein the homogeneous type solid catalyst component or the homogeneous type solid catalyst is a modified particle obtainable by contacting an aluminoxane (f) and a particle (d).

7. The process according to claim 1, wherein the homogeneous type solid catalyst component or the homogeneous type solid catalyst is a modified particle obtainable by contacting an aluminoxane (f) a particle (d) and a transition metal component (g).

8. The process according to claim 2, wherein the homogeneous type solid catalyst component or the homogeneous type solid catalyst is a modified particle obtainable by contacting an aluminoxane (f) a particle (d) and a transition metal component (g).

9. A homogeneous type solid catalyst component or a

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homogeneous type solid catalyst obtainable by the process according to claim 1.

10. A homogeneous type solid catalyst component or a homogeneous type solid catalyst obtainable by the process according to claim 2.

11. A process for producing an addition polymer which comprises polymerizing an addition polymerizable monomer using the homogeneous type solid catalyst component or the homogeneous type solid catalyst according to claim 9.

10 12. A process for producing an addition polymer which comprises polymerizing an addition polymerizable monomer using the homogeneous type solid catalyst component or the homogeneous type solid catalyst according to claim 10.

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